In the Claims:

Claims 1 to 35 (Canceled).

36. (New) An aircraft wing construction comprising:

an aircraft lifting wing that is bounded by a leading edge, a trailing edge and a wingtip edge, and that is elastically deformable in a bending direction and in a torsional direction about an elastic axis of said lifting wing extending in a span direction outwardly to said wingtip edge between said leading edge and said trailing edge;

a control surface that is pivotably connected to said lifting wing so as to be pivotable about a pivot axis extending non-perpendicular to said elastic axis and non-parallel to said wingtip edge, wherein said control surface is located offset by a spacing distance in front of said elastic axis, and wherein a pivoting deflection of said control surface about said pivot axis is adapted to exert an aerodynamic force that elastically deforms said lifting wing in said bending direction and said torsional direction about said elastic axis and thereby varies an induced drag of said lifting wing during flight of said aircraft; and

a control and/or regulating arrangement adapted to generate an actuating signal according to which said pivoting deflection of said control surface is actuated so

as to vary said induced drag toward minimization of said induced drag.

37. (New) The aircraft wing construction according to claim 36, wherein said pivot axis extends parallel to said elastic axis, and in front of said elastic axis.

38. (New) The aircraft wing construction according to claim 36, wherein said pivot axis is entirely in front of said elastic axis.

39. (New) The aircraft wing construction according to claim 38, wherein said pivot axis extends on a line that is non-intersecting with said elastic axis.

40. (New) The aircraft wing construction according to claim 36, wherein said pivot axis is entirely in front of said leading edge.

41. (New) The aircraft wing construction according to claim 36, wherein said control surface is entirely in front of said leading edge.

42. (New) The aircraft wing construction according to claim 41, wherein said control surface extends only inwardly from and does not extend outwardly beyond a line extending along

said wingtip edge of said lifting wing, in all pivoting deflection positions of said control surface.

43. (New) The aircraft wing construction according to claim 36, wherein said control surface extends only inwardly from and does not extend outwardly beyond a line extending along said wingtip edge of said lifting wing, in all pivoting deflection positions of said control surface.

44. (New) The aircraft wing construction according to claim 43, wherein said control surface extends entirely behind and does not extend in front of said leading edge.

45. (New) The aircraft wing construction according to claim 36, wherein said control and/or regulation arrangement is adapted to generate said actuating signal so as to achieve an elliptical distribution of lift over said lifting wing.

46. (New) The aircraft wing construction according to claim 36, wherein said control and/or regulation arrangement includes a measurement unit adapted to measure an actual elastic deformation of said lifting wing.

47. (New) The aircraft wing construction according to claim 36, wherein said control and/or regulation arrangement is a regulation arrangement including a measurement unit adapted to measure an actual elastic deformation of said lifting

wing and to produce corresponding measured data, a storage unit that stores desired nominal values representing a desired nominal deformation of said lifting wing prescribed for given aircraft load and aircraft flight conditions, and a comparison unit adapted to compare said measured data with said desired nominal values and to output said actuating signal dependent thereon.

48. (New) The aircraft wing construction according to claim 36, wherein said control and/or regulation arrangement is a control arrangement comprising a storage unit that stores desired nominal values, an input connected and adapted to receive aircraft load data and aircraft flight condition data, and an output adapted to output said actuating signal dependent on said desired nominal values, said aircraft load data, and said aircraft flight condition data.

49. (New) A method of varying said induced drag of said lifting wing in said aircraft wing construction according to claim 36, said method comprising using said control surface and said control and/or regulating arrangement to carry out the steps:

a) storing desired nominal values;

b) performing measurements and/or calculations to acquire aircraft load data and aircraft flight condition data;

c) producing a control surface actuating signal in consideration of and dependent on said desired nominal

values, said aircraft load data and said aircraft flight condition data; and

d) pivotally deflecting said control surface about said pivot axis in accordance with said control surface actuating signal, so that said control surface exerts an aerodynamic force that elastically deforms said lifting wing so as to reduce said induced drag toward a minimum for a given aircraft load and a given aircraft flight condition.

50. (New) The method according to claim 49, wherein said desired nominal values represent a desired nominal deformation of said lifting wing prescribed for said given aircraft load and said given aircraft flight condition, and further comprising measuring an actual elastic deformation of said lifting wing, and producing corresponding measured data further comprising comparing said measured data with said desired nominal values, wherein said producing of said control surface actuating signal is performed in consideration of and dependent on a comparison result of said comparing, and further comprising repeating said steps of said measuring of said actual elastic deformation, said producing of said measured data, said comparing, said producing of said control surface actuating signal, and said deflecting of said control surface until said measured data match said desired nominal values.